

## 3.2 Time, Rate, and Distance

Sascha cycled on a route with different kinds of conditions. Sometimes he went uphill, sometimes he went mostly downhill. Sometimes he was on flat ground. He stopped three times to record his time and distance:

- Stop 1: 5 miles in 20 minutes
- Stop 2: 8 miles in 24 minutes
- Stop 3: 15 miles in 40 minutes



### Problem 3.2 Finding Rates

Show your work. Label any rate that you find with appropriate units.

- Find Sascha's rate in miles per hour for each part of the route.
- On which part was Sascha cycling fastest? On which part was he cycling slowest?
  - How do your calculations in Question A support your answers?
- Suppose you can maintain a steady rate of 13 miles per hour on a bike. How long will it take you to travel the same distance Sascha traveled in 1 hour and 24 minutes?
- Suppose you were racing Sascha. What steady rate would you have to maintain to tie him?

**ACE** Homework starts on page 40.

### Did You Know?

The highest rate ever recorded on a pedal-powered bicycle was 166.944 miles per hour. Fred Rempelberg performed this amazing feat on October 3, 1995, at the Bonneville Salt Flats in Utah. He was able to reach this rate by following a vehicle. The vehicle acted as a windshield for him and his bicycle.



For: Information about speed records  
Web Code: ane-9031